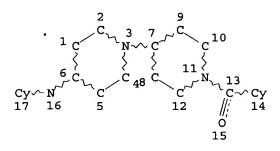
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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 8 3
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L3

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396 ANSWERS

100.0% PROCESSED 11358 ITERATIONS SEARCH TIME: 00.00.01

396 SEA SSS FUL L1

=> s.l3 and pyrimid? 1065860 PYRIMID?

L8 204 L3 AND PYRIMID?

=> fil caplus

COST IN U.S. DOLLARS
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FULL ESTIMATED COST
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
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CA SUBSCRIBER PRICE

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http://www.cas.org/infopolicy.html

 \cdot => s 18

L9 7 L8

=> s 19 and py<2001 20846668 PY<2001

L10 0 L9 AND PY<2001

=> d bib abs 1-7

L10 HAS NO ANSWERS

'BIB ABS ' IS NOT A VALID STRUCTURE FORMAT KEYWORD

Structure Formats

SIA ---- Structure Image, Attributes, and map table if it contains data. (Default)

SIM ---- Structure IMage.

SAT ---- Structure ATtributes and map table if it contains data.

SCT ---- Structure Connection Table and map table if it contains data.

SDA ---- All Structure DAta (image, attributes, connection table and map table if it contains data).

NOS ---- NO Structure data.

ENTER STRUCTURE FORMAT (SIA), SCT, SDA, SIM, SAT, NOS:end

=> d bib abs 19 1-7

L9 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

```
2005:409505 CAPLUS
DN
    142:463612
ΤŢ
    Preparation of bipiperidinyl derivatives as inhibitors of CCR5 receptors
    Miller, Michael W.; Scott, Jack D.
PΑ
     Schering Corporation, USA
so
     PCT Int. Appl., 84 pp.
     CODEN: PIXXD2
ÐΤ
    Patent
LA
    English
FAN.CNT 1
                      KIND DATE
    PATENT NO.
                                         APPLICATION NO.
                                                               DATE
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                                                                ------
    WO 2005042517
                       A2
                              20050512
                                         WO 2004-US36273
                                                                20041101
    WO 2005042517
                        A3
                               20050728
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            NE, SN, TD, TG
PRAI US 2003-516954P
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                              20031103
    MARPAT 142:463612
os
GI
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- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- Title compds. I [M = (un) substituted-aryl, -heteroaryl, -N(alkyl) pyridone AB with provisions; R1, R2 and Z independently = H, alkyl, haloalkyl; R3 = H, aryl, haloalkyl, etc.; R4 = (un)substituted-aryl, -fluorenyl, -diphenylmethyl, etc.; A = H, alkyl, alkenyl] and pharmaceutically acceptable salts, are prepared and disclosed as inhibitors of CCR5 receptors. Thus, e.g., II was prepared by coupling of III (preparation given) with N-Boc-sarcosine and subsequent treatment of the tert-Bu carbamate intermediate with 4N HCl. The activity of I was evaluated using chemotaxis and luciferase replication assays and it was revealed that selected compds. of the invention displayed IC50 values in the range of <0.1 up to 0.19 nM. I as inhibitors of CCR5 receptors should prove useful in the treatment of human immunodeficiency virus. Pharmaceutical compns. comprising I are disclosed.
- L9 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
- 2004:981365 CAPLUS AΝ
- DN 141:379943

AN

- TT Preparation of pyrazolopyrimidines as cyclin-dependent kinase inhibitors
- TN Guzi, Timothy J.; Paruch, Kamil; Dwyer, Michael P.; Doll, Ronald J.; Girijavallabhan, Viyyoor M.; Mallams, Alan; Alvarez, Carmen S.; Keertikar, Kartik M.; Rivera, Jocelyn; Chan, Tin-Yau; Madison, Vincent; Fischmann, Thierry O.; Dillard, Lawrence W.; Tran, Vinh D.; He, Zhen Min; James, Ray Anthony; Park, Haengsoon; Paradkar, Vidyadhar M.; Hobbs, Douglas Walsh
- PA Schering Corporation, USA; Pharmacopeia, Inc.
- SO U.S. Pat. Appl. Publ., 1044 pp., Cont.-in-part of U.S. Ser. No. 654,546. CODEN: USXXCO
- DTPatent
- LA English
- FAN.CNT 6

PATENT NO.

P	I US 2004209878	A1	20041021	US 2004-776988	20040211
	US 2004209878	A1	20041021	US 2004-776988	20040211
P	RAI US 2002-408027P	P	20020904		
	US 2002-421959P	P	20021029		
	US 2003-654546	A2	20030903		
	US 2004-776988	A	20040211		
G	I				

AB The title compds. [I R = H, alkyl, cycloalkyl, etc.; R2 = alkyl, halo, aryl, etc.; R3 = H, halo, aryl, etc.; R4 = H, halo, alkyl], useful as inhibitors of cyclin dependent kinases for treatment, prevention, inhibition, or amelioration of one or more diseases associated with the CDKs such as cancer, were prepared Thus, reacting II (preparation given) with 4-aminomethylpyridine afforded 93% III which showed IC50 of 0.020 μM and 0.029 μM against CDK2 kinase (cyclin A or cyclin E-dependent). The pharmaceutical composition comprising the compound I is claimed. This is a Part

III of I-III series.

L9 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:308430 CAPLUS

DN 140:321241

TI Preparation of heteroarylaminopiperidinylpiperidines as CCR5 chemokine receptor antagonists.

IN Albert, Rainer; Cooke, Nigel Graham; Thoma, Gebhard

PA Novartis A.-G., Switz.; Novartis Pharma G.m.b.H.

SO PCT Int. Appl., 32 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

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     WO 2004031172
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             LU, LV, MA, MD, MK, MN, MX, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
             RU, SC, SE, SG, SK, SY, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN,
             YU, ZA, ZW
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                                            CA 2003-2501243
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                          AA
                                20040415
                                                                   . 20031006
     EP 1551827
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                                            EP 2003-798931
                                                                    20031006
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                              20050816
     BR 2003015092
                          Α
                                            BR 2003-15092
                                                                    20031006
PRAI GB 2002-23223
                          Α
                                20021007
     WO 2003-EP11035
                          W
                                20031006
os
     MARPAT 140:321241
GI
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English

AB Title compds. [I; (1) R2 = 2,4-dimethylpyridin-3-yl-N-oxide, (a) R1 =
 thienyl, furyl, thiazolyl, 2-methylthiazolyl, R3 = benzo[1,3]dioxolyl,
 (halo)phenyl; or (b) R1 = Ph substituted by SO2Me, cyano, X = CH2, R3 =
 Ph; or (c) R1 = Ph, X = bond, R3 = pyridyl; or (2) R2 =
 2,6-dimethylphenyl, (a) R1 = pyridyl, Ph optionally substituted by CO2H,
 alkoxycarbonyl, 2-methylthiazolyl, indolyl, benzimidazol-2-yl; X1 = CH2,
 CH2CH2; R3 = (halo)phenyl; (b) R1 = Ph, X = bond, R3 = pyridyl, or R1 =
 2-methylthiazolyl, X = CH2, R3 = 1-methylindolyl; (3) R2 =
 2,4-dimethylpyridin-3-yl, (a) R1 = 2-methylthiazolyl, X = bond, R3 = Ph;
 etc.], were prepared I (R1 = 2-pyridyl; R2 = 2,4-dimethylpyridin-3-yl-N oxide; R3 = Ph; X = null) inhibited CCR5 in a Ca2+ mobilization assay with
 IC50 = 29 nM.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L9
     ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
AN
     2004:265849 CAPLUS
DN
     140:321371
ΤI
     Preparation of pyrazolopyrimidines as cyclin-dependent kinase inhibitors
IN
     Guzi, Timothy J.; Paruch, Kamil; Dwyer, Michael P.; Doll, Ronald J.;
     Girijavallabhan, Viyyoor Moopil; Mallams, Alan; Alvarez, Carmen S.;
     Keertikar, Kartik M.; Rivera, Jocelyn; Chan, Tin-yau; Madison, Vincent;
     Fischmann, Thierry O.; Dillard, Lawrence W.; Tran, Vinh D.; He, Zhen Min;
     James, Ray Anthony; Park, Haengsoon; Paradkar, Vidyadhar M.; Hobbs,
     Douglas Walsh
PA
     Schering Corporation, USA
     PCT Int. Appl., 609 pp.
SO
     CODEN: PIXXD2
DT
     Patent
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FAN.CNT 6
PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2004022561 Al 20040318 WO 2003-XB327555 20030903
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

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             MG, MK, MN, MX, NI, NO, NZ, PG, PH, PL, PT, RO, RU, SC, SE, SG,
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PRAI US 2002-408027P
                          Р
                                20020904
    US 2002-421959P
                          P
                                20021029
GΙ
```

AB The title compds. [I R = H, alkyl, cycloalkyl, etc.; R2 = alkyl, halo, aryl, etc.; R3 = H, halo, aryl, etc.; R4 = H, halo, alkyl], useful as inhibitors of cyclin dependent kinases for treatment, prevention, inhibition, or amelioration of one or more diseases associated with the CDKs such as cancer, were prepared Thus, reacting II (preparation given) with 4-aminomethylpyridine afforded 93% III which showed IC50 of 0.020 μM and 0.029 μM against CDK2 kinase (cyclin A or cyclin E-dependent). The pharmaceutical composition comprising the compound I is claimed. This is a Part

III of I-III series.

L9 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:196486 CAPLUS

DN 140:368098

TI Orally Bioavailable Competitive CCR5 Antagonists

AU Thoma, Gebhard; Nuninger, Francois; Schaefer, Marc; Akyel, Kayhan G.; Albert, Rainer; Beerli, Christian; Bruns, Christian; Francotte, Eric; Luyten, Marcel; MacKenzie, Duncan; Oberer, Lukas; Streiff, Markus B.; Wagner, Trixie; Walter, Hansrudolf; Weckbecker, Gisbert; Zerwes, Hans-Guenter

```
CS
    Novartis Institutes for BioMedical Research, Basel, CH-4056, Switz.
```

PB American Chemical Society

DTJournal

LΑ English

AB The chemokine receptor CCR5 plays an important role in inflammatory and autoimmune disorders as well as in transplant rejection by affecting the trafficking of effector T cells and monocytes to diseased tissues. Antagonists of CCR5 are believed to be of potential therapeutic value for the disorders mentioned above and HIV infection. Here we report on the structure-activity relationship of a new series of highly potent and selective competitive CCR5 antagonists. While all compds. tested were inactive on rodent CCR5, this series includes compds. that cross-react with the cynomolgus monkey (cyno) receptor. One of these compds., i.e., 26n, has good PK properties in cynos, and its overall favorable profile makes it a promising candidate for in vivo profiling in transplantation and other disease models.

THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 54 ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L9
    ANSWER 6 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
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AN 2003:202634 CAPLUS

138:238191 DN

Preparation of 1-[1-(pyrimidin-5-ylcarbonyl)piperidin-4-yl]piperidin-4-TΙ amines as CCR5 antagonists

IN Palani, Anandan; Miller, Michael W.; Scott, Jack D.

PA Schering Corporation, USA

PCT Int. Appl., 105 pp. SO

CODEN: PIXXD2

DT Patent

LΑ English

FAN.CNT 1											
	PATENT NO.	KI	ND DATE	APPLICATION NO.	DATE						
ΡI				WO 2002-US27389							
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	•	•	, RU, TJ, TM								
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	CA 2457861	Ai	A 20030313	CA 2002-2457861	20020828						
	US 2004010008	A:	20040115	US 2002-229466	20020828						
	EP 1421075	A:	L 20040526	EP 2002-766142	20020828						
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	US 2004092745	A:	20040513	US 2003-628933	20030729						
	US 2004092551										
	ZA 2004001594	A	20041124	ZA 2004-1594	20040225						
	NO 2004001266										
PRAI	US 2001-315683										
	US 2002-229466										
	WO 2002-US2738	9 W	20020828								
os	MARPAT 138:238	191									

Journal of Medicinal Chemistry (2004), 47(8), 1939-1955 SO CODEN: JMCMAR; ISSN: 0022-2623

The title compds. [I; R1 = piperidinyl, Ph, etc.; R2 = CH2Ph, 4-pyridylmethyl, etc.; R3 = 4,6-dimethylpyrimidine-5-yl, Ph, etc.; R9, R10, B = H, alkyl, haloalkyl; A = H, alkyl, alkenyl] and their pharmaceutically acceptable salts, useful, alone or in combination with another agent, in the treatment of Human Immunodeficiency Virus (HIV), solid organ transplant rejection, graft v. host disease, arthritis, rheumatoid arthritis, inflammatory bowel disease, atopic dermatitis, psoriasis, asthma, allergies or multiple sclerosis, were prepared E.g., a 6-step synthesis of II, starting from 4-hydroxypiperidine and N-Boc-4-piperidone, which showed IC50 of 1.7 nM in luciferase HIV replication assay, was given.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:793604 CAPLUS

DN 137:310816

TI Preparation of bipiperidinyl-derivatives and their use as chemokine receptors inhibitors

IN Albert, Rainer; Bruns, Christian; Nuninger, Francois; Streiff, Markus; Thoma, Gebhard; Zerwes, Hans-Guenter

PA Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft m.b.H.

SO PCT Int. Appl., 39 pp. CODEN: PIXXD2

DT Patent

LA English

FAN. CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 2002081449 A1 20021017 WO 2002-EP3871 20020408

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PRAI GB 2001-8876
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     WO 2002-EP3871
                                 20020408
OS
     MARPAT 137:310816
GΙ
```

AB Piperidine derivs. I [X = bond, CH2, CH2CH2, CHR9, CO, O, NH, NR9; R1 = R10- and/or R11-substituted Ph, heteroaryl, heteroaryl N-oxide, naphthyl; R2 = R1, R10- and/or R11-substituted fluorenyl or R10-substituted C1-6-alkyl, C2-6-alkenyl, C3-6-cycloalkyl, adamantyl, C4-8-cycloalkenyl; R3 = R2; R1XNR3 = optionally R10-substituted Z; A = CH2, NH, NR9, S, SO, SO2, O; n = 0 - 2; R4, R6 = R5, CN, OH, OR9, F, Cl, Br, I; R5, R7 = H, C1-6-alkyl, C1-6-hydroxyalkyl, C2-6-alkoxyalkyl, C1-6-haloalkyl, Ph, CH2Ph, heteroaryl; R8 = H, C1-6-alkyl, C2-6-alkenyl, C2-6-alkynyl, Ph, CH2Ph, CN, CH2NH2, CH2NHR9, CH2N(R9)2, CH2NHCOR9, CH2NR9COR9, CH2NHCONHR9, CH2NR9CONHR9, CH2NR9CON(R9)2, CH2NHCO2R9, CH2NR9CO2R9, CH2NHSO2R9, CH2N(SO2R9)2, CH2NR9SO2R9; R9 = C1-6-alky1, C3-6-cycloalky1, C2-6-alkeny1, C2-6-alkynyl, Ph, CH2Ph, heteroaryl, CF3] and their pharmaceutically acceptable salts, have interesting pharmaceutical properties, e.g., as CCR5 inhibitors. Piperidine derivs. I [R10 = C1-6-alkyl, C1-6-hydroxyalkyl, C2-6-alkoxyalkyl, C1-6-haloalkyl, C3-6-cycloalkyl, C2-6-alkenyl, C2-6-cycloalkenyl, C2-6-alkynyl, Ph, heteroaryl, heteroaryl N-oxide, F, Cl, Br, I,OH, OR9, CONH2, CONHR9, CON(R9)2, OC(:O)R9, OCO2R9, OC(:O)NHR9, OC(:O)NHR9, OC(:O)N(R9)2, OSO2R9, CO2H, CO2R9, CF3, CHF2, CH2F, CN, NO2, NH2, NHR9, N(R9)2, NHCOR9, NR9COR9, NHCONHR9, NHCONH2, NR9CONHR9, NR9CON(R9)2, NHCO2R9, NR9CO2R9, NHSO2R9, N(SO2R9)2, NR9SO2R9, SiMe3, B(OCMe3); R11 = two adjacent substituents which form an annulated 4 - 7 membered ring containing up to two heteroatoms of the group N, O, S; Y =bond, CO, COCH2, SO, SO2, CS, CH2, C(CH2CH2), CHR5, C(R4)2] have

interesting pharmaceutical properties,e.g., their use as chemokine receptors inhibitors. A process for the preparation of I comprises; (a) amidating I (YR2 = H) with R2Y'A' [Y' = CO, COCH2, SO, SO2]; A' = leaving group, e.g., Cl, Br, OH; (b) reductive amidation of I (YR2 = H); or (c) reacting I (XR1 = H) with R1X"-halogen (X" = CH2, CHR9). Thus, bipiperidinylbenzamide II (Y = CO, R2 = C6H3Me2-2,6) was prepared from bipiperidinamine II (Y = bond, R2 = H) and 2,6-Me2C6H3COCl in DMF containing EtN(CHMe2)2 and 2-(1H-benzotriazol-1-yl)-1,1,3,3-tetramethyluronium tetrafluoroborate. Bipiperidinamines I were tested as chemokine receptor inhibitors [IC50 = 2 - 3 nM vs. [I-125]MIP-1 α binding to human CCR5 membrane for I (R1 = R3 = Ph, R2 = C6H4Me2-2,6, R4 - R7 = H, R8 = Me, X = CH2, Y = C:O); IC50 = 10 μ M vs. Ca2+ mobilization for II; chemotaxis by I in presence of MIP-1 α , IC50 = \leq 1 μ M].

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d hitstr 7 L10 HAS NO ANSWERS 'HITSTR ' IS NOT A VALID STRUCTURE FORMAT KEYWORD Structure Formats SIA ---- Structure Image, Attributes, and map table if it contains data. (Default) SIM ---- Structure IMage. SAT ---- Structure ATtributes and map table if it contains data. SCT ---- Structure Connection Table and map table if it contains SDA ---- All Structure DAta (image, attributes, connection table and map table if it contains data). NOS ---- NO Structure data. ENTER STRUCTURE FORMAT (SIA), SCT, SDA, SIM, SAT, NOS:end => d hitstr 19 7 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN L9470689-17-9P 470689-20-4P 470689-21-5P IT 470689-23-7P 470689-27-1P 470689-32-8P 470689-43-1P 470689-57-7P 470689-60-2P 470689-61-3P 470689-72-6P 470689-77-1P 470689-78-2P 470689-79-3P 470689-81-7P 470689-85-1P 470689-86-2P 470689-90-8P RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (preparation of bipiperidinyl-derivs. and their use as chemokine receptors inhibitors) RN470689-17-9 CAPLUS CN[1,4'-Bipiperidin]-4-amine, 4'-methyl-1'-[(4-methyl-5pyrimidinyl)carbonyl]-N,N-diphenyl- (9CI) (CA INDEX NAME)

RN 470689-20-4 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[(4,6-dimethyl-5-pyrimidinyl)carbonyl]-4'-methyl-N,N-diphenyl- (9CI) (CA INDEX NAME)

RN 470689-21-5 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[(4,6-dimethyl-2-phenyl-5-pyrimidinyl)carbonyl]-4'-methyl-N,N-diphenyl- (9CI) (CA INDEX NAME)

RN 470689-23-7 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[[4,6-dimethyl-2-(4-pyridinyl)-5-pyrimidinyl]carbonyl]-4'-methyl-N,N-diphenyl- (9CI) (CA INDEX NAME)

RN 470689-27-1 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[(4,6-dimethyl-1-oxido-5-pyrimidinyl)carbonyl]-4'-methyl-N,N-diphenyl- (9CI) (CA INDEX NAME)

RN 470689-32-8 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 4'-methyl-N,N-diphenyl-1'-[(1,2,3,4-tetrahydro-2,4-dioxo-5-pyrimidinyl)carbonyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ &$$

RN 470689-43-1 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[[4,6-dimethyl-2-(1-oxido-4-pyridinyl)-5-pyrimidinyl]carbonyl]-4'-methyl-N,N-diphenyl- (9CI) (CA INDEX NAME)

RN 470689-57-7 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[(4,6-dimethyl-5-pyrimidinyl)carbonyl]-N,N-diphenyl- (9CI) (CA INDEX NAME)

RN 470689-60-2 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[(4,6-dimethyl-1-oxido-5-pyrimidinyl)carbonyl]-N,N-diphenyl- (9CI) (CA INDEX NAME)

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RN 470689-61-3 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[[4,6-dimethyl-2-(4-pyridinyl)-5-pyrimidinyl]carbonyl]-N,N-diphenyl- (9CI) (CA INDEX NAME)

RN 470689-72-6 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, N-(4-bromophenyl)-1'-[(4,6-dimethyl-5-pyrimidinyl)carbonyl]-N-phenyl- (9CI) (CA INDEX NAME)

RN 470689-77-1 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, N-(4-bromophenyl)-1'-[(4,6-dimethyl-1-oxido-5-pyrimidinyl)carbonyl]-N-phenyl- (9CI) (CA INDEX NAME)

RN 470689-78-2 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, N-(4-bromophenyl)-1'-[[4,6-dimethyl-2-(4-pyridinyl)-5-pyrimidinyl]carbonyl]-N-phenyl- (9CI) (CA INDEX NAME)

RN 470689-79-3 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, N-(4-bromophenyl)-1'-[[4,6-dimethyl-2-(1-oxido-4-pyridinyl)-5-pyrimidinyl]carbonyl]-N-phenyl- (9CI) (CA INDEX NAME)

RN 470689-81-7 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[(4,6-dimethyl-5-pyrimidinyl)carbonyl]-N-phenyl-N-3-pyridinyl- (9CI) (CA INDEX NAME)

RN 470689-85-1 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[(4,6-dimethyl-1-oxido-5-pyrimidinyl)carbonyl]-N-phenyl-N-3-pyridinyl- (9CI) (CA INDEX NAME)

RN 470689-86-2 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-[(4,6-dimethyl-5-pyrimidinyl)carbonyl]-4'-methyl-N-phenyl-N-3-pyridinyl- (9CI) (CA INDEX NAME)

RN 470689-90-8 CAPLUS

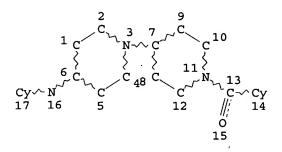
CN [1,4'-Bipiperidin]-4-amine, N-(4-bromophenyl)-1'-[(4,6-dimethyl-5-pyrimidinyl)carbonyl]-4'-methyl-N-phenyl- (9CI) (CA INDEX NAME)

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NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 8 3
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

=> s l1 ful FULL SEARCH INITIATED 08:37:38 FILE 'REGISTRY' FULL SCREEN SEARCH COMPLETED - 11358 TO ITERATE

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396 ANSWERS

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396 SEA SSS FUL L1

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L5 5 L4 AND PY<2001

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L5 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:582651 CAPLUS

DN 131:214192

TI Preparation of arylaminopiperidines as muscarinic M2 antagonists for treating memory loss

IN Asberom, Theodros; Lowe, Derek B.; Green, Michael J.

PA Schering Corporation, USA

SO U.S., 28 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	2000001 2						
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P	I US 5952349	Α	19990914	US 1997-889486	19970708 <		
P	RAI US 1996-21691P	P	19960710				
0	S MARPAT 131:214192						
G	т						

Title compds. [I; X = bond, O, S, SO, SO2, CO, C(OR7)2, CH2O, CH:CH, CH2,CHA, CA2, CONR17, SO2NR17, etc.; R = cycloalkyl, (substituted) Ph, pyridyl, indolyl, quinolyl, etc.; R1 = H, cyano, CF3, A, cycloalkyl, cycloalkenyl, alkenyl, COR15, CO2A, etc.; R2 = cycloalkyl, cycloalkenyl, BOC, (substituted) 4-piperidinyl; A = alkyl; R3, R4 = H, halo, CF3, A, alkoxy, OH; R5, R6 = H, A, CF3, alkoxy, OH, alkylcarbonyl, alkoxycarbonyl, etc.; R7 = H, A; R15 = H, A, cycloalkyl, aryl, heteroaryl; R17 = H, alkyl, aryl, heteroaryl], were prepared Thus, I (R = 3,4-methylenedioxyphenyl; X = SO2; R1 = cyano; R2 = cyclohexyl; R3-R6 = H) showed Ki = 0.44 nM for binding to M2 receptors.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

Ι

AN 1998:65892 CAPLUS

DN 128:140691

TI Preparation of 1,4-disubstituted piperidines as muscarinic antagonists

IN Asberom, Theodros; Lowe, Derek B.; Green, Michael J.

PA Schering Corp., USA

SO PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DT Patent

LA English

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FAN.CNT 1
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NZ 333513 A 20000428 NZ 1997-333513
JP 3068206 B2 20000724 JP 1998-505232
JP 11514671 T2 19991214
AT 227708 E 20021115 AT 1997-932321
ES 2182104 T3 20030301 ES 1997-932321
PT 912515 T 20030331 PT 1997-932321
KR 2000023599 A 20000425 KR 1999-700045
PRAI US 1996-678618 A 19960710
WO 1997-US11176 W 19970708
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      MARPAT 128:140691
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

The title compds. [I; X = a bond, O, S, etc.; R = C3-6 cycloalkyl, II, III, etc.; R1 = H, CN, CF3, etc.; R2 = cycloalkyl, cycloalkenyl, t-butoxycarbonyl, (un)substituted 4-piperidinyl; R3, R4 = H, halo, CF3, etc.; R5, R6 = H, alkyl, CF3, etc.], useful for treating cognitive disorders such as Alzheimer's disease, were prepared Compds. I are capable of enhancing acetylcholine (ACh) release with an ACh'ase inhibitors. Thus, a 5-step detailed synthesis of the title compound IV is described. The title compound V showed Ki of 40.8 nM against m2 receptor binding and of 66.4 nM against m4 receptor binding.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L5 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN
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AN 1997:516068 CAPLUS

DN 127:135802

TI N-acyl-2-substituted-4-(benzimidazolyl- or imidazopyridinyl)piperidines as tachykinin antagonists

IN Janssens, Frans Eduard; Sommen, Francois Maria; Surlerraux, Dominique Louis Nestor Ghislaine

PA Janssen Pharmaceutica N. V., Belg.

SO PCT Int. Appl., 50 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

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A1 19970710 WO 1996-EP5877 19961220 <--
 PI
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                 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
                        IE, IT, LU, MC, NL, PT, SE, BF, CF, CG, CI, CM, GA, GN, ML, MR,
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          AU 9713080
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                                                                              EP 1996-944686
          EP 869955
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CN 1117090 B 20030806
BR 9612326 A 19990713 BR 1996-12326
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PT 869955 T 20020429 PT 1996-944686 19961220
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CZ 294199 B6 20041013 CZ 1998-1866 19961220
ZA 9610894 A 19980623 ZA 1996-10894 19961220
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NO 9802406 A 19980623 NO 1998-2406 19980527 <
NO 313291 B1 20020909
US 6110939 A 20000829 US 1998-102121 19980619
HK 1012187 A1 20020308 HK 1998-113363 19981215

PRAI EP 1995-203650 A 19951227
EP 1995-203655 A 19951227
EP 1995-203655 A 19951227
EP 1995-203657 W 19961220
          EP 869955
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                 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE,
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$$L = -N$$

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F₃C
$$\stackrel{\text{PhCH}_2}{\longrightarrow}$$
 $\stackrel{\text{N}}{\longrightarrow}$ $\stackrel{\text{N}}{\longrightarrow}$ $\stackrel{\text{CH}_2\text{CH}_2\text{OEt}}{\longrightarrow}$ $\stackrel{\text{II}}{\longrightarrow}$

Title compds. I [n = 0-2; m = 1, 2; X = bond, O, S, NR3; X1, X2 = CH, N; Q = 0, NR3; R1 = aryl, aralkyl, diarylalkyl; R2 = aryl, aralkyl, heterocyclyl, heteroxyxlylalkyl; L = Q1; R3 = H, alkyl; R4 = (un)substituted alkyl; R5 = H, halogen, OH, alkoxy; R6 = H, alkyl, aralkyl; p = 0-2] were prepared for use as substance P antagonists. Thus, (±)-tert-Bu 7-benzyl-1,4-dioxa-8-azaspiro[4.5]decane-8-carboxylate was treated with 3,5-(F3C)2C6H3COCl, followed by 1-(2-ethoxyethyl)-2-(4-piperidinylamino)benzimidazole to give the title compound II. Cis-II gave 80.7% inhibition of substance P-induced relaxation of pig coronary artery at 3 X 10-8 M while trans-II gave 85.3 % inhibition.

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1997:499056 CAPLUS

DN 127:149078

TI Preparation of aroyl 4-piperidinopiperidides and analogs as tachykinin receptor antagonists

IN Jansseens, Frans Eduard; Sommen, Francois Maria; Surleraux, Dominique Louis Nestor Ghislaine

PA Janssen Pharmaceutica N. V., Belg.

SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

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	PAT	ENT 1	NO.			KIN	D	DATE		1	APPL:	ICAT.	ION I	<i>.</i> 00		D	ATE		
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PI	WO	9724	324			A 1		1997	0710	1	WO 1	996-	EP58	83		1	99612	220 <	<
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	WO 1996-EP5883	W	19961220	
	US 1998-102295	A1	19980622	
os	MARPAT 127:149078			
GI				

$$R-N \longrightarrow Z^{1} \longrightarrow R^{6}$$

$$Z^{2} \longrightarrow Z^{3} \longrightarrow R^{5}$$

Title compds. [I; R = C(:X) ZR2; R1 = (un) substituted (di)phenyl(alkyl); R2 = (un) substituted phenyl(alkyl), heteroaryl(alkyl), etc.; R4 = H, alkyl, alkoxycarbonyl, Ph, etc.; R5 = H, OH, NH2, phenyl(alkoxy), etc.; R4R5 = atoms to form a ring; R6 = H, OH, (phenyl) alkyl, alkoxy, etc.; X = O or (alkyl) imino; Z = bond, O, S, (alkyl) imino; Z1 = CH2 or CH2CH2; Z2,Z3 = bond, CH2, CH2CH2] were prepared Thus, 1,1-dimethylethyl 4-oxo-2-phenylmethylpiperidine-1-carboxylate was reductively condensed with N-(4-phenyl-4-piperidinyl) acetamide and the product deprotected to give I (R1 = CH2Ph, R4 = Ph, R5 = NHAc, R6 = H, Z1 = Z2 = Z3 = CH2)(II; R = H) which was amidated by 2,4-dimethylthiazole-5-carboxylic acid to give II (R = 2,4-dimethyl-5-thiazolylcarbonyl). Data for biol. activity of I were given.

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1986:50874 CAPLUS

DN 104:50874

TI N-(4-Piperidinyl) bicyclic condensed 2-imidazolamine derivatives

IN Janssens, Frans Eduard; Torremans, Joseph Leo Ghislanus; Hens, Jozef Francis; Van Offenwert, Theophilus Theresia Joannes

PA Janssen Pharmaceutica N. V., Belg.

SO Eur. Pat. Appl., 68 pp. CODEN: EPXXDW

DT Patent

, LA English FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE ____ -----______ _____ 19841206 <--EP 151824 A2 19850821 EP 1984-201812 PΙ EP 151824 A3 19851009 EP 151824 B1 19900404 R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE Α 19860513 US 1984-660670 19841015 <--US 4588722 CA 1246070 A1 19881206 CA 1984-469245 19841204 <--E AT 51621 19900415 AT 1984-201812 19841206 <--ES 539266 ES 1984-539266 19841231 <--**A1** 19860116 AU 1985-37363 19850107 <--AU 8537363 A1 19850801 B2 A2 B3 B1 A A B C A A2 B AU 575612 B2 19880804 JP 1985-251 19850107 <---JP 60174778 19850909 19850107 <--RO 1985-117231 RO 91075 19870227 19850107 <--PL 144514 19880630 PL 1985-251476 DK 8500088 19850710 DK 1985-88 19850108 <--FI 8500078 19850710 FI 1985-78 19850108 <--FI 83781 19910515 FI 83781 19910826 19850108 <--NO 8500084 19850710 NO 1985-84 19860228 HU 1985-62 19850108 <--HU 37780 HU 196389 19881128 Α ZA 1985-186 19860827 19850108 <--ZA 8500186 19850108 <--IL 1985-74017 **A**1 19880331 IL 74017 A3 19880530 . SU 1985-3838812 19851008 <--SU 1400509 NO 1989-2563 19890621 <--NO 8902563 Α 19850710 PRAI US 1984-569115 Α 19840109 US 1984-660670 Α 19841015 EP 1984-201812 Α 19841206 NO 1985-84 A1 19850108 CASREACT 104:50874 OS GI For diagram(s), see printed CA Issue. AB The title compds. [I; A = (un) substituted C6H6 or pyridine ring; R = H, alkyl; R1 = H, alkyl, cycloalkyl, aralkyl, (alkyl) furanyl, (alkyl)imidazolyl, (halo)thienyl, pyridinyl, pyrazinyl, thiazolyl, (un) substituted Ph; R2 = H, alkyl, cycloalkyl, aralkyl, alkanoyl, alkoxycarbonyl; R3 = R4Z, (un) substituted saturated heterocyclyl; R4 = acyl, acylamino, acyloxy, acylthio, (un)substituted Ph, aryl, etc.; Z = alkylene] were prepared Thus 3-chloro-2-nitropyridine was aminolyzed with 4-FC6H4CH2NH2 and the product hydrogenated to give N3-[(4fluorophenyl)methyl]-2,3-pyridinediamine. This was condensed with Et 4-isothiocyanatopiperidinecarboxylate to give pyridinylthiourea derivative II which was cyclized by heating in EtOH with HgO and S to give imidazopyridinamine III (R5 = CO2Et). The latter was decarboxylated by heating in 48% aqueous HBr to give III.2HBr (R5 = H) which was alkylated with

=> d hitstr 5

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

with an ED50 of 0.08 mg/kg s.c. or orally.

IT 99780-13-9P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as antihistaminic)

a p-methoxyphenethyl halide to give III (R5 = 4-MeOC6H4CH2CH2) (IV). I are antihistaminics. In mice IV inhibited compound 48/80-induced lethality

RN 99780-13-9 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, l'-(4-fluorobenzoyl)-N-[1-[(4-

=> d hitstr 4

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2005 ACS on STN

IT 193479-17-3P 193479-38-8P 193479-39-9P 193479-45-7P 193479-62-8P 193479-63-9P 193479-76-4P 193479-77-5P 193479-78-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aroyl 4-piperidinopiperidides and analogs as tachykinin receptor antagonists)

RN 193479-17-3 CAPLUS

CN [1,4'-Bipiperidin]-4-amine, 1'-(3,5-dimethylbenzoyl)-4-(methoxymethyl)-N-phenyl-2'-(phenylmethyl)-, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 193479-38-8 CAPLUS

CN Acetamide, N-[1'-(3,5-dimethylbenzoyl)-2'-(phenylmethyl)[1,4'-bipiperidin]-4-yl]-N-phenyl-, cis-(9CI) (CA INDEX NAME)

Relative stereochemistry.

193479-39-9 CAPLUS
Acetamide, N-[1'-(3,5-dimethylbenzoyl)-2'-(phenylmethyl)[1,4'-bipiperidin]-4-yl]-N-phenyl-, trans- (9CI) (CA INDEX NAME) CN

Relative stereochemistry.

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2001:762989 CAPLUS
AN
DN
     135:318419
     Synthesis of substituted bipiperidines and their use as H1 antagonists
ΤI
IN
     Lawrence, Louise; Rigby, Aaron; Sanganee, Hitesh; Springthorpe, Brian
PA
     Astrazeneca AB, Swed.
     PCT Int. Appl., 160 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
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FAN.CNT 1
     PATENT NO.
                         KIND
                                            APPLICATION NO.
                                DATE
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     WO 2001077101
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                                                                    20010405 <--
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
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     WO 2001-SE751
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     US 2001-827488
                          A3
                                20010406
     US 2003-341027
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                                20030113
     US 2003-436582
                          Α3
                                20030513
os
     MARPAT 135:318419
GI
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AB Title compds. I [q, s, t = 0 - 1; n, r = 0 - 5; m, p = 0 - 2; X = CH, C(O), O, S, S(O), S(O), N-; provided that when m and p are both 1 then X is not CH; Y = NHR2, OH; T = C(O), C(S), S(O), CH2; R1 = H, alkyl, aryl, heterocyclyl; R2, R47 = H, alkyl, aryl-alkyl, CO-alkyl; R3 = alkyl, alkenyl, cycloalkyl, cycloalkenyl, aryl, heterocyclyl, thioaryl, thioheterocyclyl] were prepared Examples include: data for over 600 compds., 4 solid oral dosage and 1 parenteral (general) formulations, a bioassay for Ca2+ flux, human eosinophil chemotaxis and H1 antagonism. E.g., 4-(3,4-dichlorophenoxy)piperidine was alkylated with 1-(tert-butoxycarbonyl)-4-piperidone (1,2-dichloroethane, NaBH(OAc)3, HOAc, 18 h, room temperature) to give an intermediate [1,4']bipiperidine. This intermediate was deprotected (DCM, TFA, 4 h, room temperature) and the resulting

II

bipiperidine condensed with 3-methanesulfonylbenzoic acid (THF, PYBROP, (i-Pr)2NEt, 18 h, room temperature) to give example compound II isolated as the acetate salt. I are used in the treatment of a chemokine (such as CCR3) or H1 mediated disease state.

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 736 L13

=> s 114 and pyrimid?
 1065860 PYRIMID?

L15 3 L14 AND PYRIMID?

=> d 1-3

L15 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2005 ACS on STN

RN 367500-34-3 REGISTRY

ED Entered STN: 07 Nov 2001

CN 1,4'-Bipiperidine, 1'-[3-(methylsulfonyl)benzoyl]-4-(2-pyrimidinyloxy)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C22 H28 N4 O4 S

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L15 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2005 ACS on STN

RN 367499-26-1 REGISTRY

ED Entered STN: 07 Nov 2001

CN 1,4'-Bipiperidine, 4-(3,4-dichlorophenoxy)-1'-(imidazo[1,2-a]pyrimidin-2-ylcarbonyl)- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C23 H25 Cl2 N5 O2

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L15 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2005 ACS on STN

RN **367499-06-7** REGISTRY

ED Entered STN: 07 Nov 2001

CN 1,4'-Bipiperidine, 4-(3,4-dichlorophenoxy)-1'-[[[4-(2-pyridinyl)-2-pyrimidinyl]thio]acetyl]- (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C27 H29 C12 N5 O2 S

SR CA

LC STN Files: CA, CAPLUS, USPATZ, USPATFULL

$$\begin{array}{c|c} & & & & \\ & & & \\ N & & & \\ N & & & \\ S - CH_2 - C - N & & \\ \end{array}$$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)